A New Method of
CRYPTOGRAPHY,
Humbly preſented to
The Moſt SERENE MAJESTY
OF
CHARLES the II.

By ***SAMUEL MORLAND*** Knight and Baronet, and one of the *Gentlemen*
of His MAJESTIE'S *Privy Chamber* in Ordinary. *1666.*

THE two *Correſpondents* having provided themſelves with a ſufficient number of printed Papers delineated and ſhadow'd conveniently for the purpoſe:

1. They muſt firſt of all by a mutual conſent, compleat their *Numerical Alphabet* and *Clavis Univerſalis*, in like manner as is done *Page* 5. placing in the *Numerical Alphabet* what Letters they pleaſe, (ſome *Capitall*, others *ſmall*) from an *Unite* to 34. and tranſpoſing the Numbers contained in each Marginal Number of the *Clavis Univerſalis*, in any broken Order whatſoever, each of them reſerving a Copy.

2. They muſt agree in what kind of Figure to write to each other; For by thoſe few Schemes, *Page* 2, & 3. it is evident, that the various Figures, in which any Writing of a conſiderable length may be inſcribed, are very numerous.

3. They are to reſolve what Number of *Nulls* they will either prefix, adjoyn, or intermingle with that Writing; and where thoſe *Nulls* ſhall be placed.

4. It is neceſſary to be concluded, whether they will tranſcribe what they intend to Conceal, in Upright *Columns*, or elſe by way of *Diagonalls*, or otherwiſe? as likewiſe whether the Tranſcription ſhall be aſcending, deſcending, Alternate, or Retrograde?

An *Example* or two will clear all Doubts.

Let *A.* and B. be Two *Correſpondents*:

1. Let their *Numerical Alphabet*, and *Clavis Univerſalis*, be the ſame with that *Pag.* 5.
2. Let it be agreed between them, to write to each other in a *Parallelogram*, ſuch as is *Pag.* 2. *Fig.* 1.
3. Let the Number of *Nulls* before the Writing be evermore 3, and after the Writing 4.
4. Let the way of Tranſcription be in Upright *Columnes*, and deſcending.

This done, *A.* writes to *B.* the following words: viz. *This Way of Writing is of all other the moſt facil and expeditious, as well to unlock, as to conceale.*

That is to ſay,

The Method of Hiding.

Firſt, He inſcribes it in one of the printed Papers delineated and ready for the purpoſe, as *Page* 2. *Fig.* 1. onely every other Word (or thereabouts) he begins with a Capital Letter, for the eaſe of *B.* in Diſcovering.

2. Then he findes by the ſmall Figures over the *Parallelogram*, that his Writing has advanced 9 Columnes.
3. Therefore he ſeeks for 9 in the Margent of the *Clavis Univerſalis*, and in the ſame Row findes (6, 5, 9, 1, 4, 7, 2, 8, 3.) which he places in the void Squares over the ſaid 9 Columnes.
4. This done, he takes the Paper in which he intends to write, and according to the Agreement aforeſaid, prefix 3 *Nulls*, viz. (*stl*) After that, to let his *Correſpondent* know, that there are juſt 9 Columnes in the Writing, he puts down (N) which by the *Numerical Alphabet* ſignifies 9. and next to that, another (N) to ſignifie that there are juſt 9 Lines; As likewiſe the following Letter (*d*) to notifie, that there are 2 *Nulls* to compleat the Figure; and the next Letter to that, *viz.* (*n*) that there are 4 *Nulls* at the latter end.
5. *Laſtly*, He tranſcribes all the Columnes, beginning firſt with that which is (1,) and to that adjoyns the Column over which is (2,) and ſo to the end; to which he addes 4 *Nulls*, and ſends the Writing to *B.* thus:

stlNN, dnstlelieccygttsdotslfseFxs, UodWilMatlk, ehrfTceslo TWOrapAncanoonilAaoihtEuotpiiahidwonfoak.

The Method of Diſcovering.

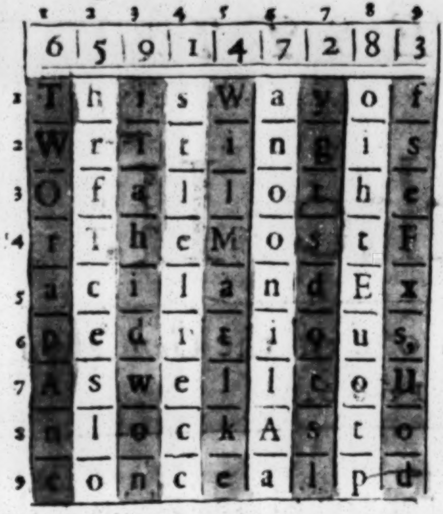
When *B.* receives this Writing, Firſt of all (according to the aforeſaid private Agreement) he cancells 3 Letters at the beginning, and 6 at the latter end, for *Nulls*; then he findes by the 4th and 5th Letters, *viz.* (N) and (N) that the Writing is compoſed of 9 Columnes, and does contain 9 *Horizontall* Lines.

Therefore he immediately repairs to his *Clavis Univerſalis*, and out of that, over the head of 9 Columnes of one of his printed Papers (delineated and ſhadow'd for the purpoſe) he tranſcribes the following Numbers, *viz.* (6, 5, 9, 1, 4, 7, 2, 8, 3.) and then, having divided the Writing by a Prick, Line, or any other Mark of Diſtinction between each 9 Letters, as is hereafter done, he inſcribes the firſt 9 Letters in that Column over which is the Figure (1) and the next 9 Letters in that Column over which is the Figure (2) and ſo on, till all the Columnes be fill'd and compleated; (where is to be noted by the way, that He who writes, if he has written all his minde, and there yet remain any odde blanck Squares, he fills them, and thoſe Letters (ſuch as are (*pd*) in the

Example) are always to be *Nulls* of courſe.) Which done, the Writing diſcovers it ſelf to be the very ſame with that *Pag.* 2. *Fig.* 1. To which there are alſo adjoyn'd divers other different Figures, containing the ſame form of words.

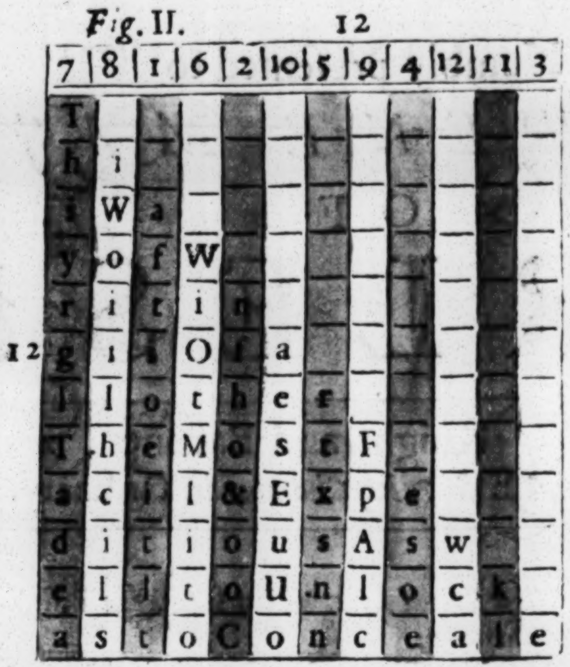
** * * NN] stleliece] ygtsdotsl] fseFxs, Vod] WilMatlk, e] hrſ Tces Lo] TWO rap Anc] anoonilAa] eiht EUotp] iiabidwen * * * **

Fig. I.



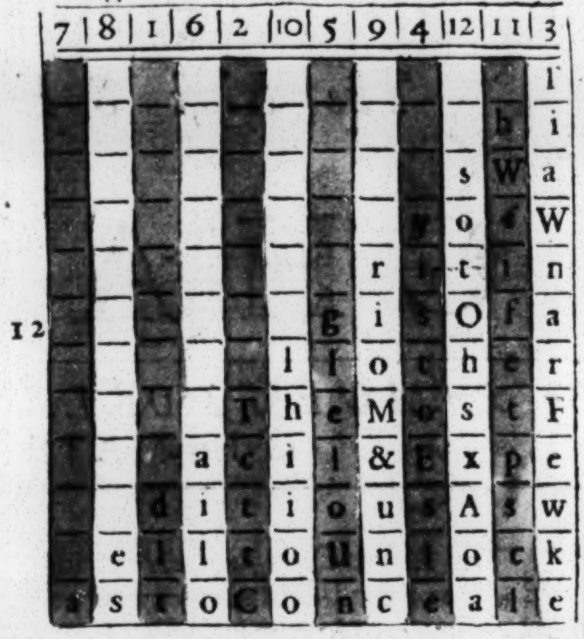
	1	2	3	4	5	6	7	8	9
	6	5	9	1	4	7	2	8	3
1	T	h	i	s	W	a	y	o	f
2	W	r	i	t	i	n	g	i	s
3	O	f	a	l	l	o	t	h	e
4	r	T	h	e	M	o	s	t	F
5	a	c	i	l	a	n	d	E	x
6	p	e	d	i	t	i	o	u	s,
7	A	s	w	e	l	l	t	o	U
8	n	l	o	c	k	A	s	t	o
9	C	o	n	c	e	a	l	p	d

Fig. II. 12



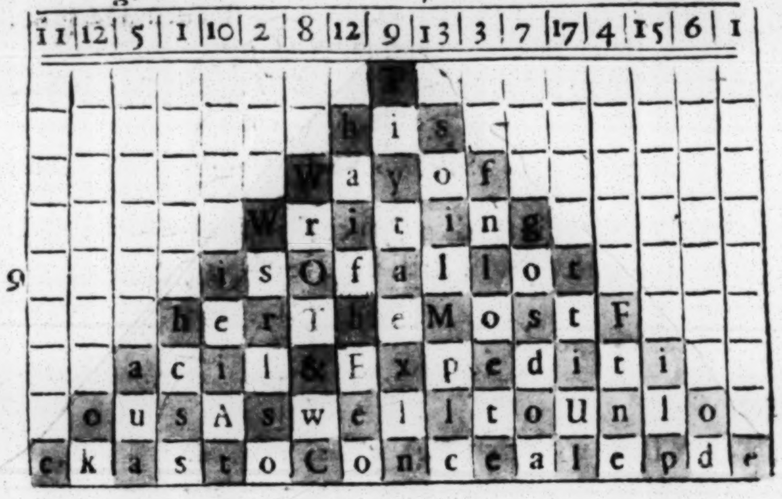
7	8	1	6	2	10	5	9	4	12	11	3
T											
h	i										
i	W	a									
y	o	f	W								
r	i	t	i	n							
g	i	s	O	f	a						
l	l	o	t	h	e	r					
T	h	e	M	o	s	t	F				
a	c	i	l	&	E	x	p	e			
d	i	t	i	o	u	s	A	s	w		
e	l	l	t	o	U	n	l	o	c	k	
a	s	t	o	C	o	n	c	e	a	l	e

Fig. III. 12



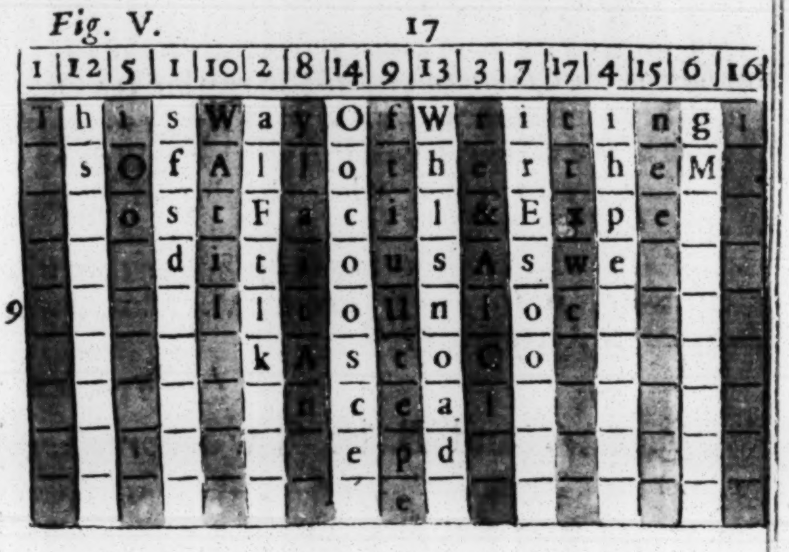
7	8	1	6	2	10	5	9	4	12	11	3
											I
										h	i
									s	W	a
								y	o	f	W
							r	i	t	i	n
						g	i	s	O	f	a
					l	l	o	t	h	e	r
				T	h	e	M	o	s	t	F
			a	c	i	l	&	E	x	p	e
		d	i	t	i	o	u	s	A	s	w
	e	l	l	t	o	U	n	l	o	c	k
a	s	t	o	C	o	n	c	e	a	l	e

Fig. IV. 17



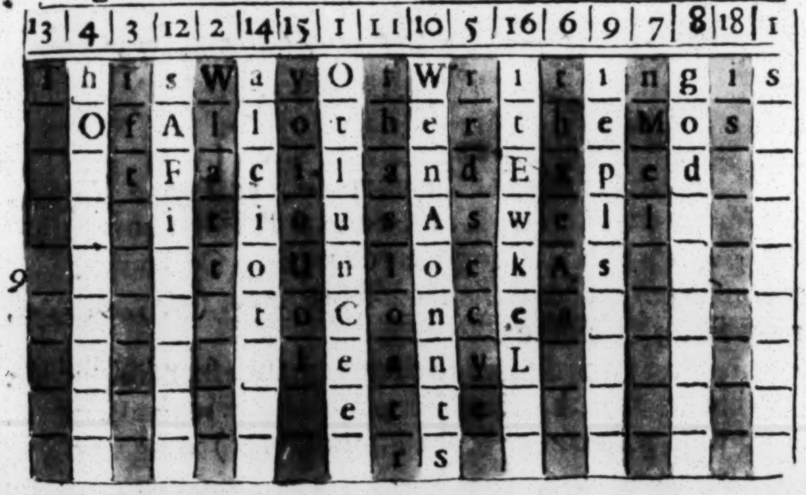
11	12	5	1	10	2	8	12	9	13	3	7	17	4	15	6	1
								T								
							h	i	s							
						W	a	y	o	f						
					W	r	i	t	i	n	g					
				i	s	O	f	a	l	l	o	t				
			h	e	r	T	h	e	M	o	s	t	F			
		a	c	i	l	&	F	x	p	e	d	i	t	i		
	o	u	s	A	s	w	e	l	l	t	o	U	n	l	o	
c	k	a	s	t	o	C	o	n	c	e	a	l	e	p	d	e

Fig. V. 17



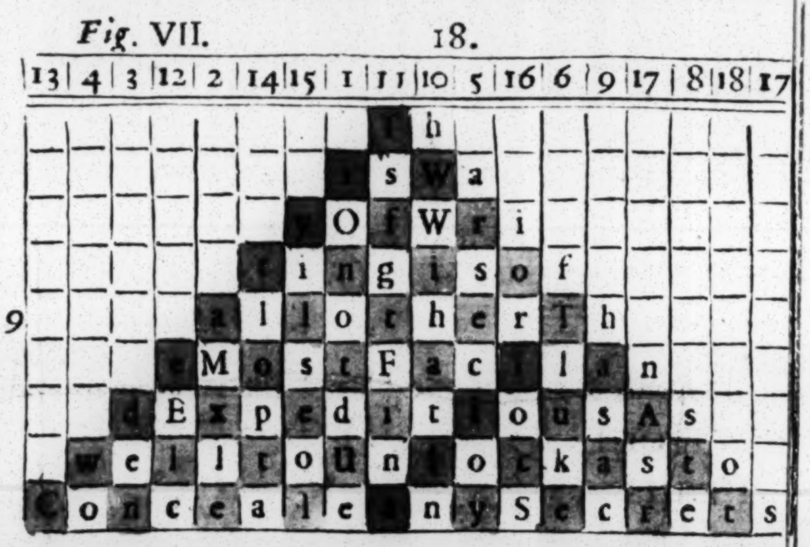
1	12	5	1	10	2	8	14	9	13	3	7	17	4	15	6	16
T	h	i	s	W	a	y	O	f	W	r	i	t	i	n	g	i
	s	O	f	A	l	l	o	t	h	e	r	t	h	e	M	
		o	s	t	F	a	c	i	l	&	E	x	p	e		
			d	i	t	i	o	u	s	A	s	w	e			
				l	l	t	o	U	n	l	o	c				
					k	A	s	t	o	C	o					
						n	c	e	a	l						
							e	p	d							
								e								

Fig. VI. 18



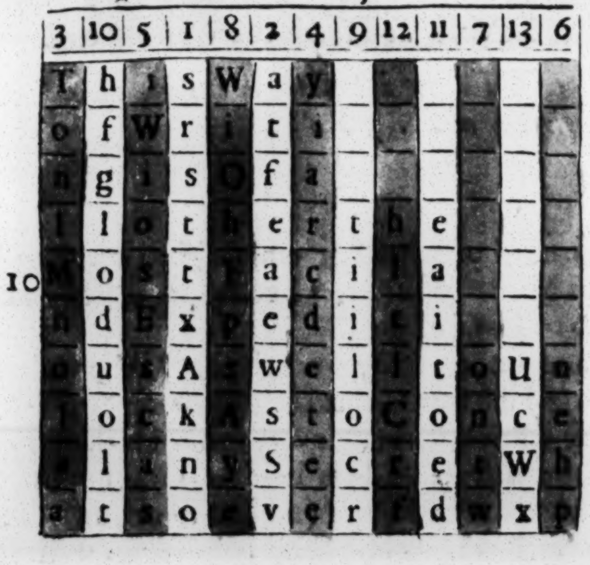
13	4	3	12	2	14	15	1	11	10	5	16	6	9	7	8	18	1
T	h	i	s	W	a	y	O	f	W	r	i	t	i	n	g	i	s
	O	f	A	l	l	o	t	h	e	r	t	h	e	M	o	s	
		t	F	a	c	i	l	a	n	d	E	x	p	e	d		
			i	t	i	o	u	s	A	s	w	e	l	l			
				t	o	U	n	l	o	c	k	A	s				
					t	o	C	o	n	c	e	a					
						l	e	a	n	y	L						
							e	t	t	e							
								r	s								

Fig. VII. 18.



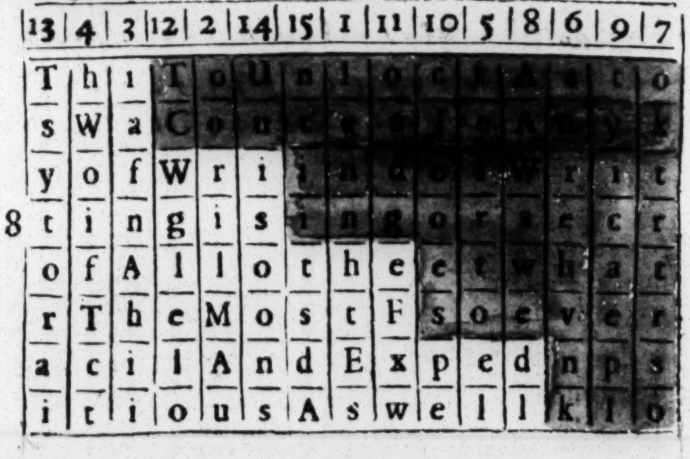
13	4	3	12	2	14	15	1	11	10	5	16	6	9	17	8	18	17
								T	h								
							i	s	W	a							
						y	O	f	W	r	i						
					t	i	n	g	i	s	o	f					
				a	l	l	o	t	h	e	r	T	h				
			e	M	o	s	t	F	a	c	i	l	a	n			
		d	E	x	p	e	d	i	t	i	o	u	s	A	s		
	w	e	l	l	t	o	U	n	l	o	c	k	a	s	t	o	
C	o	n	c	e	a	l	e	a	n	y	S	e	c	r	e	t	s

Fig. VIII. 15



3	10	5	1	8	2	4	9	12	11	7	13	6
T	h	i	s	W	a	y						
o	f	W	r	i	t	i						
n	g	i	s	O	f	a						
l	l	o	t	h	e	r	t	h	e			
M	o	s	t	F	a	c	i	l	a			
n	d	E	x	p	e	d	i	t	i			
o	u	s	A	s	w	e	l	l	t	o	U	n
l	o	c	k	A	s	t	o	C	o	n	c	e
a	l	a	n	y	S	e	c	r	e	t	W	h
a	t	s	o	e	v	e	r	f	d	w	x	p

Fig. IX. 15



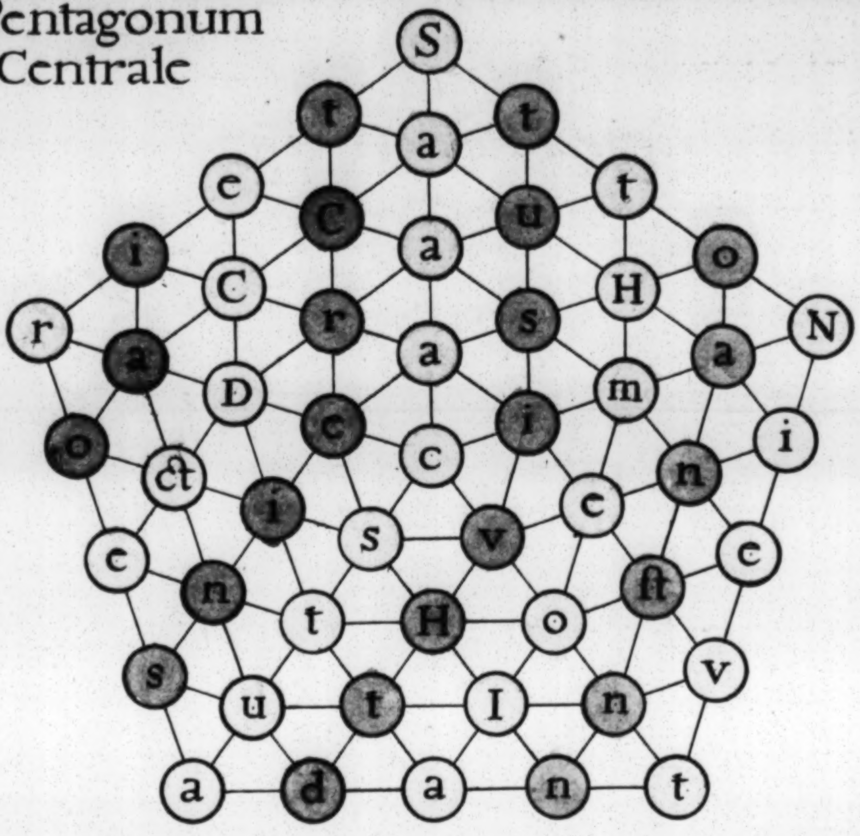
13	4	3	12	2	14	15	1	11	10	5	8	6	9	7
T	h	i	T	o	U	n	l	o	c	k	A	s	t	o
s	W	a	C	o	n	c	e	a	l	e	A	n	y	k
y	o	f	W	r	i	i	n	[illegible]	o	[illegible]	W	r	i	t
t	i	n	g	i	s	i	n	g	o	r	S	e	c	r
o	f	A	l	l	o	t	h	e	e	t	w	h	a	t
r	T	h	e	M	o	s	t	F	s	o	e	v	e	r
a	c	i	l	A	n	d	E	x	p	e	d	n	p	s
i	t	i	o	u	s	A	s	w	e	l	l	k	l	o

Of all the foregoing Methods, this laſt is the moſt intricate, and for ought I know, the moſt uſefull and (ſure I am) applicable to any Figure whatſoever.

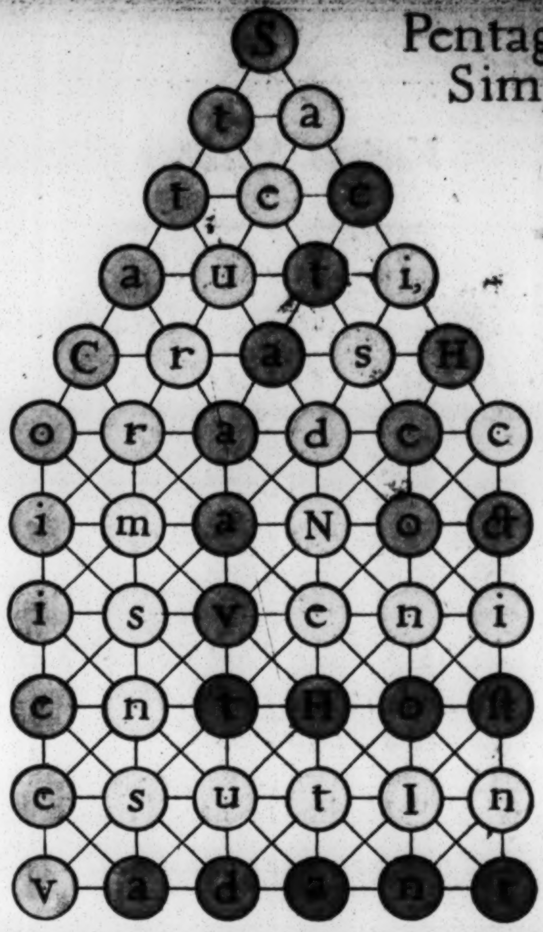
Scriptio Cryptographica.

State cauti, cras horâ decimâ noctis venient hostes, ut invadant Urbem

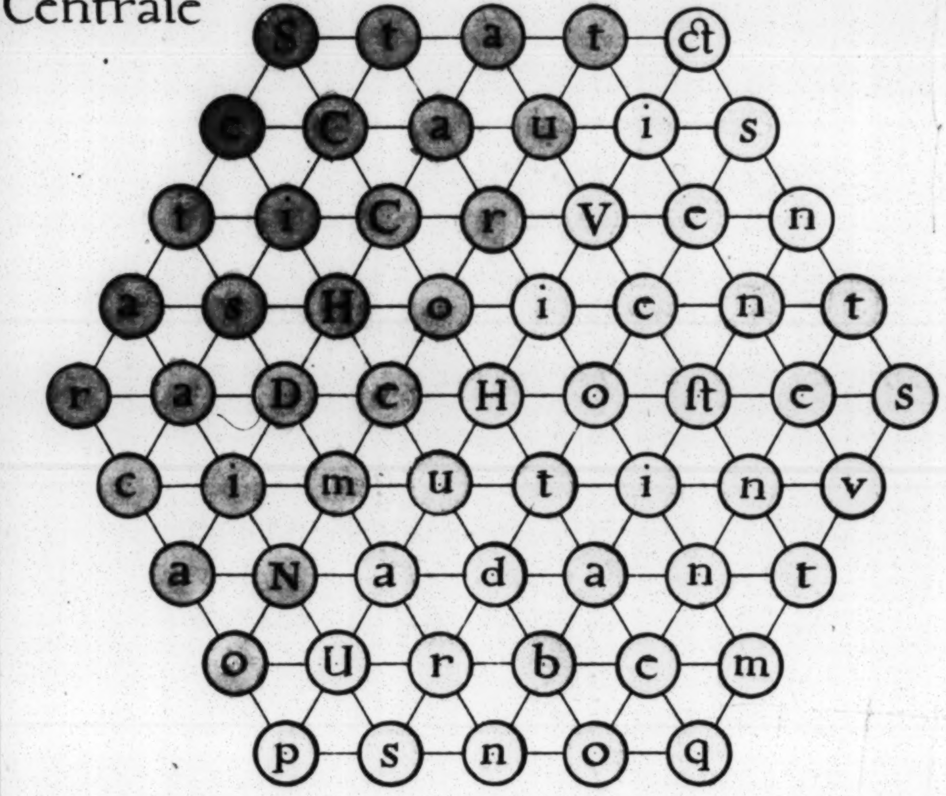
Pentagonum Centrale



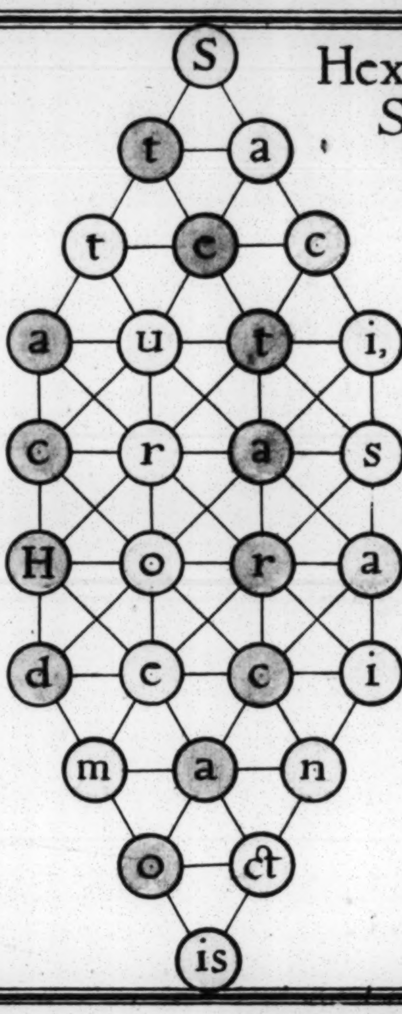
Pentagonum Simplex



Hexagonum Centrale

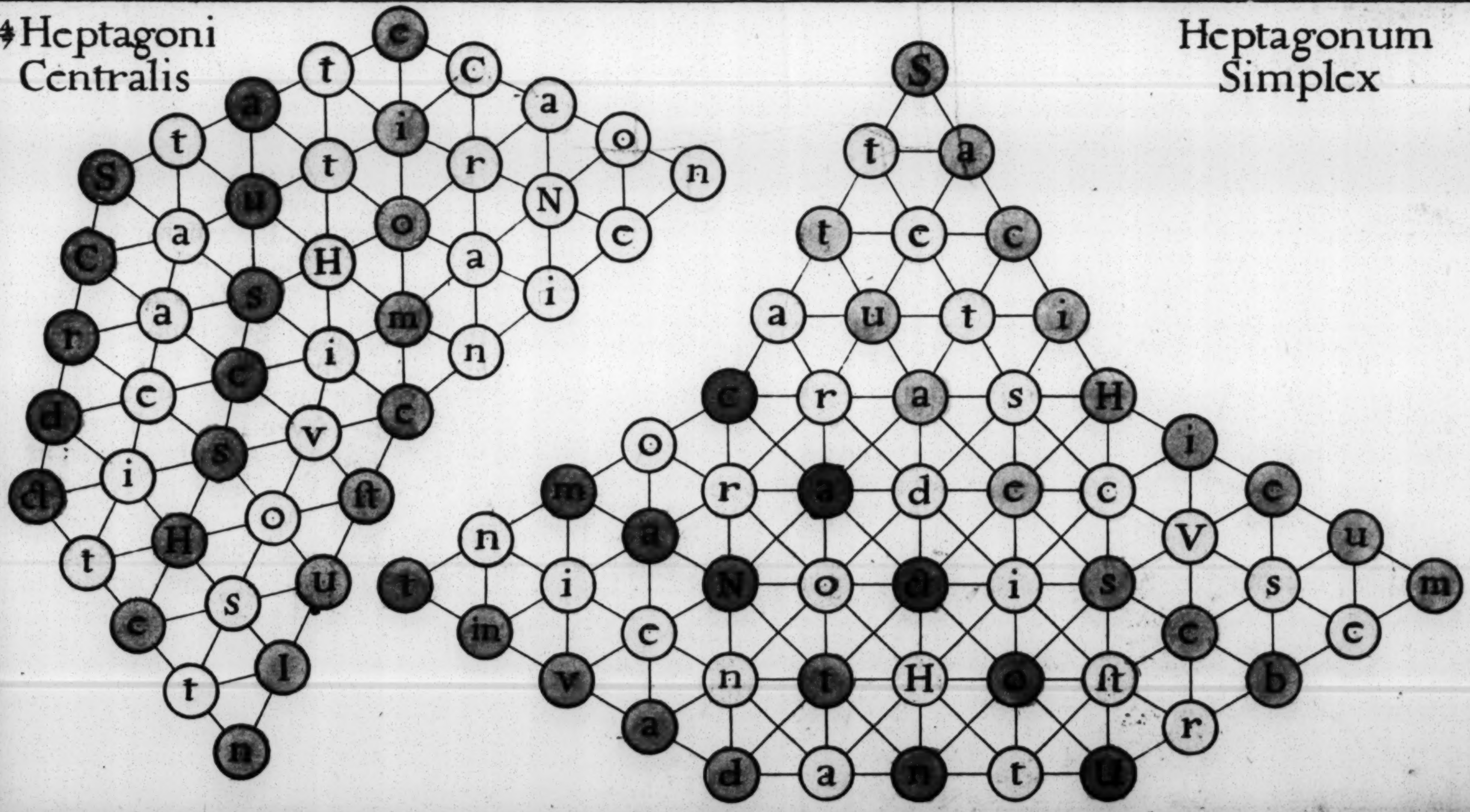


Hexagonum Simplex



Heptagoni Centralis

Heptagonum Simplex



Various Methods of Tranſcribing the Words conteyn'd in Fig. I. Pag. 2.

The Firſt Method reads and tranſcribes the Writing (as before, *Pag.* 1.) in *Upright Columnes*, and *deſcending* according to the *Numerical Alphabet*, and the *Clavis Univerſalis.*

stelieccygtsdotslfseFxsllodWilMatlkehrfTcesloTWOrapAncanoonilAaoihtE uotpiiahid won

The 2^d Method reads and tranſcribes it in *Upright Columnes*, aſcending.

cceileltslstodstgydollsxFesfekltaMliWolsecTfrhcnAparOWTaAlinoonaptuE hionowdihaii.

The 3^d Method reads and tranſcribes it in *Upright Columnes*, deſcending and aſcending, *alternately*.

stleliecclstodstgyf seFxsll odekltaMliWhrf TcesloCn AparOWTanoonilAaptou E thioiiahidwo n.

The 4^th Method reads and tranſcribes it in *Upright Columnes*, aſcending and deſcending *alternately*.

cceileltsygtsdotsldollsxFesf WilMatlkeolsecT frhT WOrap AncaAlinoonaoihtE uotpnowdihaii.

The 5^th Method reads and tranſcribes it in *Upright Columnes*, and deſcending, (and that in their natural Order, as likewiſe do all the following Methods!) not reſpecting the *Numerical Alphabet*, or *Clavis Univerſalis.*

TWOrapAnchrfTcesloiiahidwonstlelieccWilMatlkeanoonilAaygtsdotsloihtEu otpfseFxsllod.

The 6^th Method reads and tranſcribes it in *Upright Columnes*, aſcending.

cn AparOWTolsecTfrhnowdihaiicceileltsekltaMliWaAlinoonalstodstgyptouE hiodollsxFes f.

The 7^th Method reads and tranſcribes *Fig.* I. in *Diagonal Lines*, and deſcending, beginning with the firſt Letter [*T*] in the *Dexter Poynt.*

ThWirOsifrWtaTaailhcpynleieAogoMldsnfitoaiwlcshsnteooetdilcnF Eolk cxu tAesosalltlopd.

The 8^th Method reads and tranſcribes *Fig.* I. in *Diagonal Lines*, and aſcending, beginning with the the ſame Letter [*T*] in the *Dexter Poynt* of the Figure.

TWhOrirfisaTatWpchliaAeielnynsdlMogoclwiaotif ooetnshsnclidteckloEFeAtu xasosltllpod.

The 9^th Method reads and tranſcribes *Fig.* I. in *Diagonal Lines* deſcending, and aſcending *alternately*, from the ſame Letter [*T.*]

ThWOrisifraTatWailhcpAeielnyogoMldsnclwiaotifshsnteoonclidteFEolkceAt uxsosaltllopd.

The 10th Method reads and tranſcribes *Fig.* I. in *Diagonal Lines*, aſcending and deſcending *alternately*, from the ſame Letter [*T.*]

TWhirOrfisWtaTapchliaynleieAnsdlMogofitoaiwlcooetnshsetdilcnckloEFxutA easosltlpod.

By theſe few Methods of tranſcribing this firſt Figure, the Ingenious and learned Reader will eaſily perceive, that it may yet be read and tranſcribed in a very great number of other different wayes and Methods, and that without altering the *Tranſpoſitions* of the 9 *Columnes*. Now, if this firſt Figure afford ſuch variety of Tranſcriptions without new *Tranſpoſitions*, the other different Figures afford each of them as many more; And by the *Clavis Univerſalis*, *Pag.* 5. compoſed from the *Table of Permutation*, Pag. 7. it is evident, that every ſuch Figure containing but 9 Columnes, admits of no leſs than Three Hundred Sixty two Thouſand, eight Hundred and eighty different *Tranſpoſitions*; And others of them, as *Fig.* VI. and VII. containing 18 Columnes, admit of Six Thouſand four Hundred and two *Millions* of *Millions*, of different *Tranſpoſitions*; More by Three Hundred ſeventy three Thouſand, ſeven Hundred and five *Millions*; More by Seven Hundred twenty and eight *Thouſand*; And there being in the Writing 81 Letters, they make an Oblong containing 27 *Columnes* and three Lines; And conſequently ſuch a Figure will admit of 10888869450418352160768000000 diſtinct *Tranſpoſitions.*

But foraſmuch as ***Examples*** edifie the Reader much better than bare Words, I have in the 6th *Page* inſerted a longer Writing than the former, in a plain *Parallelogram*, conſiſting of 34 *Upright Columnes*, and containing 20 Lines, excepting onely 2 *Nulls* at the latter end to compleat the Figure.

The Words of the Writing are in *French*, viz.

Entre les plus belles & admirables Iuventions qu'ait jamais produit l'eſprit de l'homme, ſans doute que celle des Chyffres n'y tient pas le dernier lieu, puiſque par ſon moyen nous traueſtiſſons nos penſées, & les deſguiſons en ſorte, qu'elles paſſent inconnuës dans les Pays Ennemis, & ſont quelquefois mieux venuës, en Pays de cognoiſſance, & plus cherement accueillés de nos Amis, habillés à l'eſtrangere, & dans ce deſguiſement, que ſi elles y paroiſſoient ſans Voile, & à la deſcouuerte. Et veritablement c'eſt une raiſon qui la doit faire beancoup eſtimer, comme ſçauent aſſez tous ceux qui font profeſſion de gouuerner en la Politique, où commander en la Militaire, leſquels ſeroient en dainger de voir ſouuent leurs deſſeins trahis par l'infidelité d'un Meſſager, & leurs penſées deſcouuertes par la ſurpriſe de leurs Ennemis.

The Numerical Alphabet.

A	B	C	D	E	F	G	H	K	L	M	N	R	S	T	V	W	X	a	b	c	d	e	f	g	h	i	k	m	n	o	p	q	r
14	28	15	8	34	16	6	27	7	17	5	9	13	29	10	30	1	25	12	18	26	2	24	11	19	22	3	20	31	4	32	21	23	33

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
W	*d*	*i*	*n*	*M*	*G*	*K*	*D*	*N*	*T*	*f*	*a*	*R*	*A*	*C*	*F*	*L*	*b*	*g*	*k*	*p*	*h*	*q*	*e*	*X*	*c*	*H*	*B*	*S*	*V*	*m*	*o*	*r*	*E*

CLAVIS UNIVERSALIS.

1	1																																	
2	2	1																																
3	1	3	2																															
4	4	1	3	2																														
5	2	5	1	4	3																													
6	[illegible]	[illegible]	[illegible]	[illegible]	5	3																												
7	3	7	1	5	2	4	6																											
8	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]																										
9	6	5	9	1	4	7	2	8	3																									
10	3	7	1	10	6	2	8	9	4	5																								
11	6	1	11	10	3	5	7	2	4	9	8																							
12	7	[illegible]	[illegible]	6	2	10	5	9	4	12	11	3																						
13	3	10	5	1	8	2	4	9	12	11	7	13	6																					
14	2	[illegible]	[illegible]	14	11	13	3	6	12	[illegible]	[illegible]	9	10	[illegible]																				
15	8	10	9	1	13	2	12	7	15	11	5	14	6	3	4																			
16	5	16	3	12	2	[illegible]	11	14	1	10	4	8	[illegible]	[illegible]	7	6																		
17	11	12	5	1	10	2	8	14	9	13	3	7	17	4	15	6	16																	
18	13	4	3	12	2	14	15	1	11	10	[illegible]	16	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	7																
19	10	1	17	9	7	16	3	11	5	18	15	12	8	2	19	13	14	4	6															
20	6	16	2	7	15	17	1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]														
21	9	8	10	6	7	12	5	11	1	18	17	2	21	3	4	16	20	15	14	19	13													
22	2	17	1	19	16	15	18	14	4	3	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]												
23	18	10	8	6	4	2	11	16	19	17	1	22	5	12	20	13	3	21	7	14	23	15	9											
24	2	24	10	17	8	16	22	6	15	1	11	14	3	18	7	19	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]										
25	5	25	16	23	1	6	15	14	22	13	4	24	2	7	12	20	3	11	17	21	19	9	10	18	8									
26	13	17	11	16	18	21	14	23	7	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]								
27	27	12	25	11	24	1	5	13	2	23	15	22	14	21	6	10	3	20	4	26	9	7	19	17	8	16	18							
28	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]						
29	17	28	19	18	2	1	27	20	7	8	21	16	3	5	4	15	14	22	6	29	23	11	9	10	24	12	25	26	13					
30	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				
31	27	26	11	1	10	25	2	9	24	21	22	3	8	23	20	4	12	19	13	5	18	14	6	7	28	17	29	15	16	31	30			
32	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		
33	3	14	13	16	8	23	9	15	22	1	7	12	24	6	26	2	11	25	21	17	28	4	10	18	27	5	20	30	32	29	19	31	33	
34	6	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Thus is written, what is to be *hidden.*

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
	6	11	30	17	29	18	3	12	28	39	31	27	2	13	20	32	7	26	14	10	5	25	21	33	1	9	23	15	34	22	4	16	24	8	
1	E	n	t	r	e	l	e	s	P	l	u	s	B	e	l	l	e	s	&	a	d	m	i	r	a	b	l	e	s	I	n	v	e	n	1
2	t	i	o	n	s,	q	u'	a	i	t	j	a	m	a	i	s	p	r	o	d	u	i	t	l'	E	s	p	r	i	t	d	e	l'	h	2
3	o	m	m	e	S	a	n	s	d	o	u	t	e	Q	u	e	c	e	l	l	e	d	e	s	C	h	y	ff	r	e	s	n'	y	T	3
4	i	e	n	t	p	a	s	l	e	D	e	r	n	i	e	r	l	i	e	u,	p	u	i	s	q	u	e	p	a	r	s	o	n	M	4
5	o	y	e	n	n	o	u	s	T	r	a	v	e	s	t	i	s	s	o	n	s	N	o	s	p	e	n	s	é	e	s,	&	l	e	5
6	s	D	e	s	g	u	i	s	o	n	s	e	n	ſ	o	r	t	e,	q	u'	e	l	l	e	s	P	a	s	s	e	n	t	I	n	6
7	c	o	n	n	u	ë	s	d	a	n	s	l	e	s	P	a	y	s	E	n	n	e	m	i	s,	&	s	o	n	t	q	u	e	l	7
8	q	u	e	s	f	o	i	s	m	i	e	u	x	V	e	n	u	ë	s	E	n	p	a	y	s	d	e	C	o	n	n	o	i	s	8
9	ſ	a	n	c	e,	&	p	l	u	s	c	h	e	r	e	m	e	n	t	A	c	c	u	e	i	l	l	i	e	s	d	e	N	o	9
10	s	A	m	i	s,	h	a	b	i	l	l	e	e	s	à	l'	e	s	t	r	a	n	g	e	r	e	&	d	a	n	s	c	e	D	10
11	e	g	u	i	s	e	m	e	n	t,	q	u	e	s	i	E	l	l	e	s	y	p	a	r	o	i	s	s	o	i	e	n	t	S	11
12	a	n	s	V	o	i	l	e	&	a	l	a	D	e	s	c	o	u	v	e	r	t	e	E	t	V	e	r	i	t	a	b	l	e	12
13	m	e	n	t	C	'e	s	t	V	n	e	R	a	i	s	o	n	Q	u	i	L	a	I	o	i	t	f	a	i	r	e	B	e	a	13
14	u	c	o	u	p	e	s	t	i	m	e	r,	c	o	m	m	e	S	ç	a	u	e	r	t	A	s	s	e	z	T	o	u	s	C	14
15	e	u	x	Q	u	i	f	o	n	t	P	r	o	f	e	s	s	i	o	n	d	e	C	o	u	v	e	r	n	e	r	E	n	l	15
16	a	P	o	l	i	t	i	q	u	e,	O	ù	c	o	m	m	a	n	d	e	r	e	n	l	:	M	i	l	i	t	a	i	r	e,	16
17	L	e	s	q	u	e	l	s	S	e	r	o	i	e	n	t	e	n	D	a	i	n	g	e	r	d	e	v	o	i	r	S	o	u	17
18	u	e	n	t	l	e	u	r	s	D	e	s	s	e	i	n	s	t	r	a	h	i	s	P	a	r	l'	i	n	f	i	d	e	l	18
19	i	t	é	d'	U	n	M	e	s	s	a	g	e	r,	&	l	e	u	r	s	P	e	n	s	é	e	s	D	e	s	c	o	u	u	19
20	e	r	t	e	s	p	a	r	l	a	ſ	u	r	p	r	i	s	e	D	e	L	e	u	r	s	E	n	n	e	m	ï	s	d	s	20

Thus, by a bare Tranſpoſition (together with a few *Nulls,*) is *hidden*, what is above written.

a E C q p s s, s i r o t i A u a r a é s B m e n e n e xeee Dacociser eu'nsuisipaml s s f i lu M a
A s p W X n p E k i n d s s s, nqndseatorarici dne Psenncayr Ludrib P L E toioscqſseam
n e a L n i e e p c l s t y u e e l onesaeses nbT Menlso DSeaCle, ulus bsbue P& dleiVtsuM
D r e E a d l u, n u' u E A r s e i a neaasenimey Doua Agnecu Peetr saslssdslbeettoqsrer
e a Q i s ſ s V r s s e i o f o e e r, p & oleoq Estteuuçod Drr D erffpssoCidsraerlviDn ven'o
& t u o e c n b B u E i S d o s r n e, tnsnsciiVtu' Qlqtd'e lqaaonëo& hei'eeiteenp ltoDrnni
s l t, à n m t e, e D s a l i u e t o P e e à i ssmemnı& riteiolmaugae Dn Gngsnu Itereetgsn
i t r T e t i f s m l p y e n asel& sefseiel' snel'ynl Iei Net lesnroeud midu NlepcnPtaeeen
i e e s r e i s e, s ë n s l u Q S i n n t u e s atruelubéuaRr, rùosgu PideToamuin& VinuSssl
e s, S p n g u f e, s, s o C p u i u l U stomneenenmusnoxosnét ujueassecl qlee POreaſ lserir
anml' Ecomsmtulirl'sss eiyeer Eoto LePsrsiraésnoeaoiiznionee p f g.

Thus, by the help of the *Clavis Univerſalis,* and *Numerical Alphabet*, a bare Tranſcription diſcovers what was *hidden.*

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
	6	11	30	17	29	18	3	12	28	19	31	27	2	13	20	32	7	26	14	10	5	25	21	33	1	9	23	15	34	22	4	16	24	8	
1	E	n	t	r	e	l	e	s	P	l	u	s	B	e	l	l	e	s	&	a	d	m	i	r	a	b	l	e	s	I	n	v	e	n	1
2	t	i	o	n	s,	q	u'	a	i	t	j	a	m	a	i	s	p	r	o	d	u	i	t	l'	E	s	p	r	i	t	d	e	l'	h	2
3	o	m	m	e	S	a	n	s	d	o	u	t	e	Q	u	e	c	e	l	l	e	d	e	s	C	h	y	ff	r	e	s	n'	y	T	3
4	i	e	n	t	p	a	s	l	e	D	e	r	n	i	e	r	l	i	e	u,	P	u	i	s	q	u	e	p	a	r	s	o	n	M	4
5	o	y	e	n	N	o	u	s	T	r	a	v	e	s	t	i	s	s	o	n	s	N	o	s	p	e	n	s	é	e	s,	&	l	e	5
6	s	D	e	s	g	u	i	s	o	n	s	e	n	ſ	o	r	t	e,	q	u'	e	l	l	e	s	P	a	s	s	e	n	t	I	n	6
7	c	o	n	n	u	ë	s	d	a	n	s	l	e	s	P	a	y	s	E	n	n	e	m	i	s,	&	s	o	n	t	q	u	e	l	7
8	q	u	e	s	f	o	i	s	m	i	e	u	x	V	e	n	u	ë	s	E	n	p	a	y	s	d	e	C	o	n	n	o	i	s	8
9	S	a	n	c	e,	&	p	l	u	s	c	h	e	r	e	m	e	n	t	A	c	c	u	e	i	l	l	i	e	s	d	e	N	o	9
10	s	A	m	i	s,	h	a	b	i	l	l	e	e	s	à	l'	e	s	t	r	a	n	ç	e	r	e	&	d	a	n	s	c	e	D	10
11	e	g	u	i	s	e	m	e	n	t,	q	u	e	s	i	E	l	l	e	s	y	p	a	r	o	i	s	s	o	i	e	n	t	S	11
12	a	n	s	V	o	i	l	e	&	a	l	a	D	e	s	c	o	u	v	e	r	t	e	E	t	V	e	r	i	t	a	b	l	e	12
13	m	e	n	t	C	'e	s	t	V	n	e	R	a	i	s	o	n	Q	u	i	L	a	D	o	i	t	f	a	i	r	e	B	e	a	13
14	u	c	o	u	p	e	s	t	i	m	e	r,	c	o	m	m	e	S	ç	a	u	e	n	t	A	s	s	e	z	T	o	u	s	C	14
15	e	u	x	Q	u	i	f	o	n	t	P	r	o	f	e	s	s	i	o	n	d	e	G	o	u	v	e	r	n	e	r	E	n	l	15
16	a	P	o	l	i	t	i	q	u	e,	O	ù	c	o	m	m	a	n	d	e	r	e	n	l	a	M	i	l	i	t	a	i	r	e,	16
17	L	e	s	q	u	e	l	s	S	e	r	o	i	e	n	t	e	n	D	a	i	n	g	e	r	d	e	v	o	i	r	S	o	u	17
18	u	e	n	t	l	e	u	r	s	D	e	s	s	e	i	n	s	t	r	a	h	i	s	P	a	r	l'	i	n	f	i	d	e	l	18
19	i	t	é	d'	U	n	M	e	s	s	a	g	e	r,	&	l	e	u	r	s	P	e	n	s	é	e	s	D	e	s	c	o	u	u	19
20	e	r	t	e	s	p	a	r	l	a	ſ	u	r	p	r	i	s	e	D	e	L	e	u	r	s	E	u	n	e	m	ï	s	d	s	20

I Am not ignorant that there are ſome *Virtuoſi* of this *Sæculum*, who vainly perſwade others, and (I believe!) deceive themſelves, by pretending that they are able, by I know not what *Analytick Art*, to unfold all Myſteries of this nature whatſoever , and that no *Secret* can be made ſo to wander in any Paper-*Labyrinth*, But they will finde an *Ariadnian Clue* to trace it in, and fetch it out.

I muſt confeſs, as to the ordinary Methods of *Cryptography*, (vulgarly termed *Writing in Cypher*) where they are weakly contrived , or careleſly written, it's very poſſible, with much pains and induſtry, to gather the Contents; (I have often done it my ſelf, and ſeen it done by others !) But where a *Cypher* is dexterouſly compoſed , and made uſe of warily, There let any ſuch Pretender ſhew his ability in making the leaſt diſcovery, —*& erit mihi Magnus Apollo* !) In the mean time, if he pleaſe, he may contemplate the following Reflections upon the foregoing Method.

1. The foregoing Method is comparatively with others, wonderfully facil and practicable, foraſmuch as it requires very little more pains than a double Tranſcription of the Letter to be written , (which is no more than what all States-men do, whether they write in *Cypher* or no !) And to *uncypher* or open, one ſingle Tranſcription do's the Buſineſs.
2. Let him conſider in how many *Parallelograms* , *Triangles*, and other mixt *Figures*, any Writing may be inſcribed.
3. The various wayes, windings, and turnings by which any Writing may be tranſcribed out of any ſuch Figures.
4. The many places each Line affords for inſcribing *Nulls*, beſides the beginning, and latter end ; as likewiſe whole *Columnes*, which may, by a private accord, be reſerved.
5. Into how many *Millions* of *Millions*, of *Millions*, of *Millions*, of *Millions*, of *Millions*, of diſtinct Orders, both the *Numerical Alphabet*, and Marginal Numbers of the *Claſſis Univerſalis*, may be tranſpoſed, as in the following *Table* ; for an Explanation whereof, I refer the Reader to *Clavius*, *Kircherus*, and others.

A Table *of the various* Permutations, *or* Tranſpoſitions *of* 34 *different Letters, Numbers, or Things.*

I	1
II	2
III	6
IV	24
V	120
VI	720
VII	5040
VIII	40320
IX	362880
X	3628800
XI	39916800
XII	479001600
XIII	6227020800
XIV	87178291200
XV	1307674368000
XVI	20922789888000
XVII	355687428096000
XVIII	6402373705728000
XIX	121645100408832000
XX	2432902008176640000
XXI	51090942171709440000
XXII	1124000727777607680000
XXIII	25852016738884976640000
XXIV	620448401733239439360000
XXV	15511210043330985984000000
XXVI	403291461126605635584000000
XXVII	10888869450418352160768000000
XXVIII	304888344611713860501504000000
XXIX	8841761993739701954543616000000
XXX	265252859812191058636308480000000
XXXI	8222838654177922817725562880000000
XXXII	263130836933693530167218012160000000
XXXIII	8684967618811853495518194401280000000
XXXIV	295288899039603018847618609643520000000

Learned *Tacquet* in his *Arithmetick*, *lib.* 5. *c.* 8. affirmes, That the *Permutations* of 24 Letters are ſo numerous, that a Thouſand Millions of able Clerks, in a Thouſand Millions of Years, (and that neither ſparing *Dominicals* or *Feſtivals*) were not able to tranſcribe them ! And *Guldinus* aſſerts, That the Books which might be compiled of the variety of 23 Letters onely (accounting 500 *Pages*, or 1000 *Faces* to each Volumne, and 100 Lines to each Face, and 60 Letters to each Line, and not any two Words in any of thoſe Volumnes the ſame !) would do more than twice cover the whole Superficies of the Earth and Sea. Nay further, he ſeems to be of opinion, That the Paper of thoſe Volumnes , laid ſingly Sheet by Sheet, would cover the very Firmament. Now, if the Tranſpoſitions of 24 Letters be ſo numerous, what are thoſe of 34 (which are yet of greateſt uſe in this Method) ? The laſt Sum of the foregoing *Table* is a Number conſiſting of 39 Places, and that for the bare Tranſpoſitions of 34 Letters or Numbers : But when each of thoſe ſhall come to be altered, intermingled with , and transformed by all the various Figures of *Inſcription*, Methods of *Tranſcription*, and *Nulls*; I am bold to aſſert, that the *Sum. Tot.* would be greater than that of *Archimedes* in his ΨΑΜΜΙΤΗΣ, whereby he would expreſs the Number of Sands , which would do more than fill the cavity of a Sphere equal to the Orb of the *Fixed Stars*, according to the dimenſions of the Cœleſtial Bodies determined by *Ariſtarchus Samius*.

To apply this more cloſely to the purpoſe, ſuppoſe the Writing, as it layes hid *Page 6.* were given to the ableſt *Cryptograph-Analyſt* in the World, to open, or *Uncypher*; and grant that he knew, that it was written according to ſome of the Rules of the foregoing Method.

1. It is impoſſible for him to divine the Number of *Nulls*, or where they are placed.

2. It's as impoſſible (without being privy to the *Numerical Alphabet*) to know certainly how many *Columnes*, or how many *Lines* this Writing conſiſts of, or where thoſe *Indicial Letters* are placed.

3. Admit he ſhould (which is never to be imagined!) accidentally gueſs at the Number of *Columnes*, *Lines*, *Nulls*, and *Indicial Letters*; yet ſtill he is to ſeek in what *Figure* it is inſcribed, that is to ſay, whether in a *Parallelogram*, *Triangle*, *Trapezium*, *Rhomboides*, *Polygon Simple*, *Polygon Central*, or ſome other mixt Figure, or Figures?

4. Put caſe he knew that it was (as it is) in a *Parallelogram*; He is but little nearer his ends than before, unleſs he knew whether the *Tranſcription* were in *Upright* Columnes, or *Diagonalls*? And that *Deſcending*, *Aſcending*, or *Retrograde*? Or whether in *Circular*, *Serpentine*, or *Horizontal* Lines?

5. But imagin he had all theſe: As likewiſe that he knew in what Language it were written, (for that alſo is no ſmall Difficulty!) He has yet another Task, which is, to finde out the true *Tranſpoſitions* of theſe 34 *Columnes*, by often trying, and comparing *Columnes* with *Columnes*; where there are no leſs than 29528889903960301884761860964351999999 falſe wayes, and but onely one, which is exactly true. Now how any Mortal ſhould hope in all his life time, (were he ſure to live *Quadrillions* of *Trillions*, of *Billions* of *Methuſalem's* years!) to hit upon ſo many Heterogeneous *Quaſita* mentioned in the Premiſes, for which he has in a manner no *Data*, it cannot enter into my Underſtanding. And I leave the Ingenious Reader to Judge, whether the rolling of *Sicyphus*. his Stone up the *Hill*, be not a Labour as likely to ſucceed as His? But if all this will not ſatisfie, Then let ſuch a Pretender give me leave to lead him yet a Step further, where he will quickly ſee, what falſe footing all his *Zetetick* and *Analytick* devices are like to finde upon theſe *Steganographical* Quickſands: And that it will be as eaſie for him to diſcover the way of an *Eagle* in the *Ayre*, and to mark out preciſely, where that ſubtil *Element* has been devided and cloſed up again; as to trace a *Secret* through all the turnings, windings, and dark Paſſages of ſo many *Cryptographical Maanders*, Unleſs he *work* (and that moſt profoundly!) by the *Black Art*, or elſe an *Angel* from *Heaven*, in kindneſs, reveal it to him.

CRYPTOGRAPHIA CRYPTOGRAPHICA
duplex, triplex, quadruplex, &c.
in infinitum.

LET the Correſpondents *A.* and *B.* mutually agree, in all Matters of great importance, to write to each other by a *Cryptographia Cryptographica Quadrupla*, for which they have ſome private Mark. And ſuppoſe *A.* deſire to ſend *B.* the following Intelligence:

> ***Sir, Look to your Self; for this Night your Perſon is to be ſeized, And the Caſtle to be deliverd up to the Enemy by your own Souldiers.***

1. It is accorded between them, that whatſoever they write, muſt be inſcribed in 4 diſtinct *Figures*: the firſt whereof is to be a *Rectangle Parallelogram*, as *Pag. 9. Fig. 1.* The 2d Figure a *Rhomboides*, as *Pag. 9. Fig. 2.* The 3d a *Rectangle Triangle*, as *Pag. 10. Fig. 3.* And the 4th a *Trapezium*, as *Pag. 10. Fig. 4.*

2. Theſe 4 Figures are to be inſcribed, and read as follows:

The Firſt Figure is to be inſcribed in *Horizontal Lines*, and to be read in *Upright Columnes*, and *deſcending* (according to the foregoing Precept) by the *Numerical Alphabet*, and *Clavis Univerſalis*. The Second Figure is likewiſe to be inſcribed in *Horizontal Lines*, and to be read in *Upright Columnes*; that is to ſay, The firſt *Upright Columne* of the Firſt Figure, makes the firſt *Horizontal Line* of the Second Figure. And ſo the ſecond *Upright Columne* of the Firſt Figure, makes the ſecond *Horizontal Line* of the Second Figure; And ſo all the *Columnes* of the Firſt Figure is to be inſcribed into the Second Figure one after the other in their Order.

The Third Figure is to be inſcribed in *Horizontal Lines*, that is, The firſt *Upright Columne* of the Second Figure makes as many, or as few *Horizontal Lines* of the Third Figure, as it falls out to be longer or ſhorter, (beginning with the *Vertex* or *Rectangle* of the Third Figure.) Thus of (*o r n u s e e*) the firſt Letter (*o*) makes the firſt *Horizontal Line* of the Third Figure; and (*r n u*) make the ſecond; and (*s e e*) make a part of the Third, which (*i r*) the two firſt Letters of the ſecond *Upright Columne* of the Second Figure make good; And the following Letters (*s C D e o o s*) make the fourth *Horizontal Line*; And ſo on, till the Third Figure be fully compleated.

But now the Third Figure is to be read, (not in *Upright Columnes*, but) in *Diagonal Lines*, according to the following Method, That is to ſay, Beginning with the *Diagonal Line* (*r b e t t n y*, &c.) from *Numb.* (1) under the *Hypotenuſe* of the Figure; And ſo aſcending to the Letter (*o*) at the *Vertex*, and from thence deſcending to (*a*) which anſwers to *Numb.* (2); Then again beginning with the Letters (*n n e e t y*, &c.) of the *Diagonal Line* anſwering to *Numb.* (3) and aſcending to (*n*) in the *Angle*, and from thence deſcending to the Letter (*i*) which anſwers to *Numb.* (4). Then repeating the ſame Thing from *Numb.* (5) to *Numb.* (6), Then from *Numb.* (7) to *Numb.* (8); And ſo on, till the Figure be as it were wound off to nothing.

The Fourth and laſt Figure is to be inſcribed in *Alternate Diagonals*, Thus, namely of the Letters [*rbeutn yssro*] of the firſt *Diagonal Line* of the third Figure, *A.* places the firſt Letter [*r*] in the *Dexter Poynt* of the fourth Figure. Then, leaving the two next Squares voyd, he fills the third *Diagonal* with the 3 next Letters [*beu*] After which he leaves another *Diagonal* voyd, and the fourth *Diagonal* he fills with the Letters [*tnuss*] And ſo he proceeds, till the whole Writing be inſcribed.

This done, *A.* might fill the voyd *Diagonals* with *Nulls*; But ſuppoſing him to be in the Enemies Countrey, and fearing his Letter may fall into their hands, and he be conſtrained to open the Writing, he fills the voyd *Diagonals* with another Diſcourſe altogether different from the former, *viz.*

Dear Cozin, I do not a little wonder at your long ſilence, and am exceeding fearfull, that ſome accident has befallen you ſince your arrival.

After which Writing he puts ſix *Nulls* [*plsadd*] to fill up all. But of this more at large in the Method of *Opening*, or *Diſcovering* the forementioned Intelligence.

3. This fourth Figure is to be read in *Upright Columnes*, according to the foregoing Method, by the *Numerical Alphabet*, and *Clavis Univerſalis*, and ſo tranſcribed fairly, as it ought to be ſent to *B.* leaving onely room for 13 Letters at the beginning of the ſecond Line.

4. Of the 13 Letters at the beginning of the 2^{d} Line (which are to ſerve for *Indices*, or *Exponents!*) the firſt three ſerve to expound the firſt *Inſcription* or *Figure*, the three next, the ſecond *Figure*; the three following ſerve for the third *Figure*, and the laſt three for the fourth: That is to ſay,

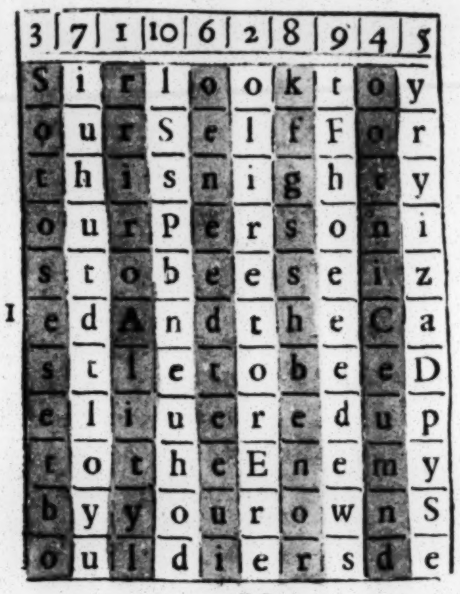
The firſt Letter [*T*] gives *B.* to underſtand, that the firſt *Figure* conſiſts of 10 *Columnes*; The next Letter [*f*], that there are in it juſt 11 *Lines*; The third Letter [*d*], that there are two *Nulls* to compleat the Figure.

The fourth, fifth, and ſixth Letters [*kTs*] let *B.* know, that the ſecond *Figure* has 20 *Columnes*, 10 *Lines*, and no *Nulls* to compleat it. For [*s*] and all other Letters that are not found in the *Numerical Alphabet*, may be uſed at pleaſure, to ſignifie *Negatives*; as here [*s*] ſignifies that there are *no Nulls* to compleat the ſecond *Figure*.

The ſeventh, eighth, and ninth ſignifie, that the Baſe of the third *Figure* contains 21 *Places*, the *Lines* thereof are eleven, and the *Nulls* to lengthen out the laſt Line eleven, *viz.* [*spkmdaswxna.*]

The tenth, eleventh, and twelfth denote, that the *Columnes* of the fourth *Figure* are 27, the *Lines* 11, and the *Nulls* 3. viz. [*nfn.*] And the thirteenth and laſt Letter [*G*] ſerves to inform *B.* that there are 6 *Nulls* at the latter end of the Writing, as *A.* ſends it to him. All which may be ſeen by the reſpective Figures, in which are the 4 *Tranſcriptions*.

Fig. I. *The Firſt Inſcription.*

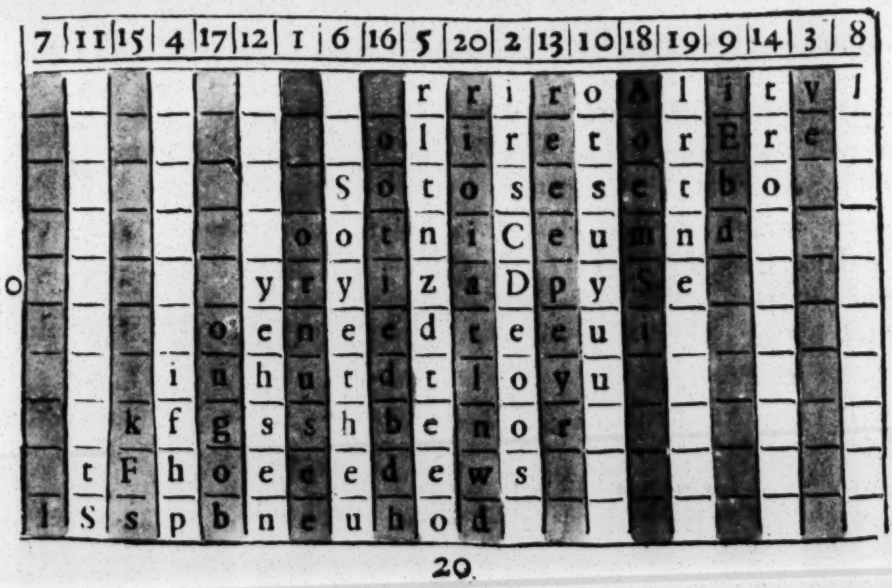


3	7	1	10	6	2	8	9	4	5
S	i	r	l	o	o	k	t	o	y
o	u	r	S	e	l	f	F	o	r
t	h	i	s	n	i	g	h	t	y
o	u	r	P	e	r	s	o	n	i
s	t	o	b	e	e	s	e	i	z
e	d	A	n	d	t	h	e	C	a
s	t	l	e	t	o	b	e	e	D
e	l	i	u	e	r	e	d	u	p
t	o	t	h	e	E	n	e	m	y
b	y	y	o	u	r	o	w	n	S
o	u	l	d	i	e	r	s	d	e

11

10

Fig. II. *The Second Inſcription.*

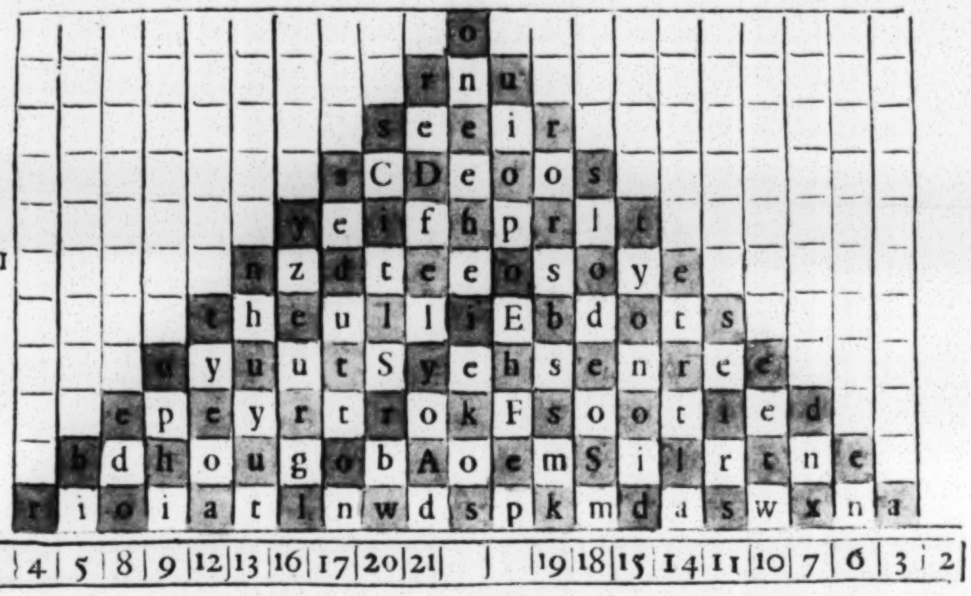


7	11	15	4	17	12	1	6	16	5	20	2	13	10	18	19	9	14	3	8
									r	r	i	r	o	A	l	i	t	y	l
								o	l	i	r	e	t	o	r	E	r	e	
							S	o	t	o	s	e	s	c	t	b	o		
						o	o	t	n	i	C	e	u	m	n	d			
					y	r	y	i	z	a	D	p	y	S	e				
				o	e	n	e	e	d	t	e	e	u	l					
			i	u	h	u	t	d	t	l	o	y	u						
		k	f	g	s	s	h	b	e	n	o	r							
	t	F	h	o	e	e	e	d	e	w	s								
l	S	s	p	b	n	e	u	h	o	d									

10

20.

Fig. III. *The Third Inſcription.*

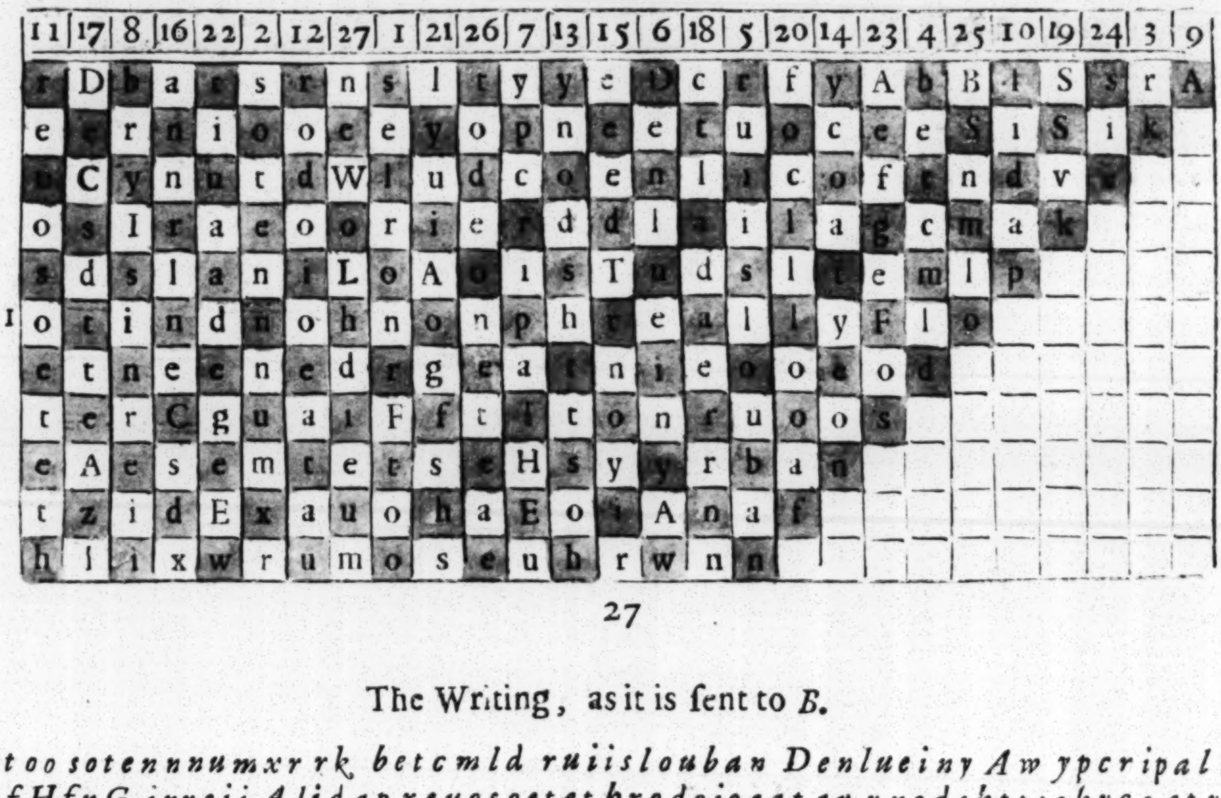


											o										
										r	n	u									
									s	e	e	i	r								
								s	C	D	e	o	o	s							
							y	e	i	f	h	p	r	l	t						
11						n	z	d	t	e	e	o	s	o	y	e					
					t	h	e	u	l	l	i	E	b	d	o	t	s				
				u	y	u	u	t	S	y	e	h	s	e	n	r	e	c			
			e	p	e	y	r	t	r	o	k	F	s	o	o	t	i	e	d		
		b	d	h	o	u	g	o	b	A	o	e	m	S	i	l	r	t	n	e	
	r	i	o	i	a	t	l	n	w	d	s	p	k	m	d	a	s	w	x	n	a

| 1 | 4 | 5 | 8 | 9 | 12 | 13 | 16 | 17 | 20 | 21 | | 19 | 18 | 15 | 14 | 11 | 10 | 7 | 6 | 3 | 2 |

21

Fig. IV. *The Fourth Inſcription.*



	11	17	8	16	22	2	12	27	1	21	26	7	13	15	6	18	5	20	14	23	4	25	10	19	24	3	9
	r	D	b	a	s	s	r	n	s	l	t	y	y	e	D	c	r	f	y	A	b	B	I	S	s	r	A
	e	e	r	n	i	o	o	e	e	y	o	p	n	e	e	t	u	o	c	e	e	S	i	S	i	k	
	u	C	y	n	u	t	d	W	l	u	d	c	o	e	n	l	i	c	o	f	r	n	d	v	[illegible]		
	o	s	I	r	a	e	o	o	r	i	e	r	d	d	l	a	i	l	a	g	c	m	a	k			
	s	d	s	l	a	n	i	L	o	A	o	i	s	T	u	d	s	l	t	e	m	l	p				
11	o	t	i	n	d	n	o	h	n	o	n	p	h	r	e	a	l	l	y	F	l	o					
	e	t	n	e	e	n	e	d	r	g	e	a	t	n	i	e	o	o	e	o	d						
	t	e	r	C	g	u	a	i	F	f	t	l	t	o	n	r	u	o	o	s							
	e	A	e	s	e	m	t	e	t	s	e	H	s	y	y	r	b	a	n								
	t	z	i	d	E	x	a	u	o	h	a	E	o	i	A	n	a	f									
	h	l	i	x	w	r	u	m	o	s	e	u	h	r	w	n	n										

27

The Writing, as it is ſent to *B.*

selronr Ftoo sotennnumxrrk betcmld ruiislouban Denlueiny Aw ypcripal H Eubry Is
Tf dkTspf fHfnG inreii Alidap reuosoetet hrodoioeatau ynodshttsohycoatyeonee dTr
noyirannr lneCsd x DeCsdtte Azl ctladaerrnn SSvk focl llooaf lyui Aogfshstiuaadeg
eEW Aef geFossie BSnmlo todeoneteae neWoLhdieum spw onk.

The Method of Diſcovering what is before, by a Quadruple Inſcription, *hidden.*

1. WHen *B.* receives the Writing, The firſt thing he do's, is to draw a *Line* under, or to put ſome other Mark of diſtinction upon the 13 firſt Letters of the 2^d Line of the ſaid Writing, which he knows to be *Indices* of the 4 Figures.

2. That done, by the 10^th and 11^th of thoſe Letters, [*Hf*] he marks with *pricks*, as here underneath is expreſt, the firſt Figure of *Tranſcription*, (which by the forementioned Accord, he knows to be a *Trapezium*!) And then tranſcribes the Writing into that Figure, till it be compleated; as it is, *Pag.* 10. *Fig.* 4. omitting onely a certain Number of *Nulls*, which are eaſily known by the 13^th and laſt of thoſe *Indices*, viz. [*G*]

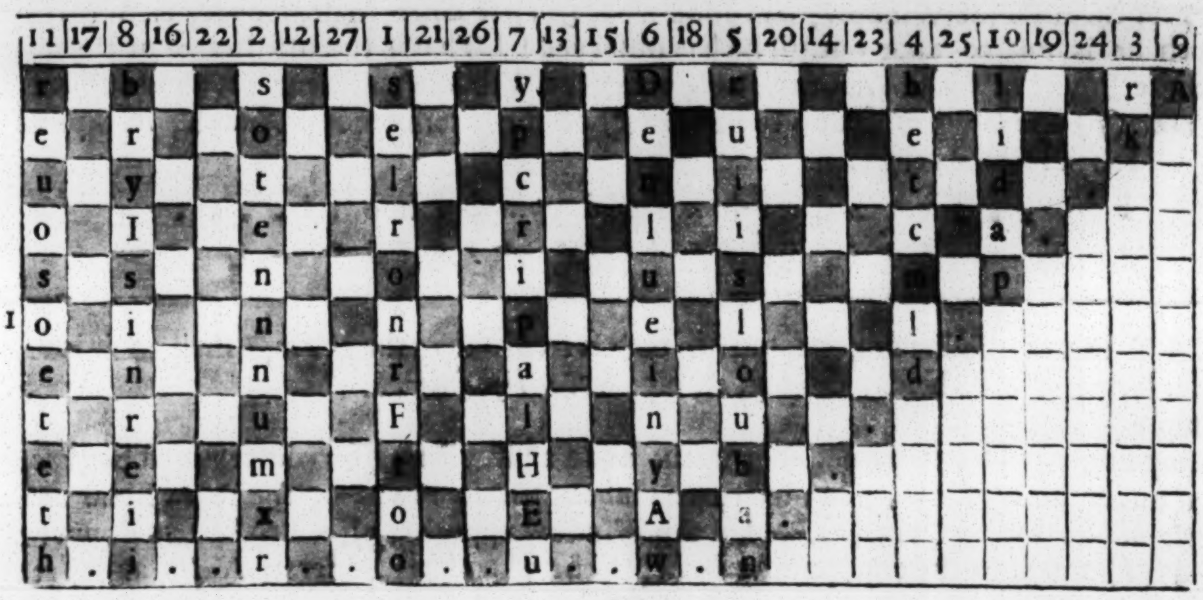
3. In the next place, he daſhes out all the alternate *Diagonal Lines* of that Figure, commencing from the Letter [*r*] in the *Dexter Poynt* of the Figure *excluſive*, which by the ſame private Agreement were deſtin'd for *Nulls*, (or at leaſt for Diſguiſes) And then tranſcribes the remainder into a *Rectangle-Triangle*, of whoſe Height and *Hypotenuſe*, the 7^th and 8^th Letters of the 2^d Line of the Writing, are ſufficient *Indices*, onely a certain Number of *Nulls*, denoted by the 12^th *Index*, viz. [*n*] are omitted.

In the 4^th place, having, by the 4^th and 5^th *Indices*, with *poynts* or *pricks*, determined by limits, the 3^d Figure of *Tranſcription* (which he knows is a *Rhomboides*) he fills and compleats it out of the *Rectangle-Triangle*, omitting onely ſo many Letters for *Nulls*, as [*f*] the 9^th Letter of that 2^d Line, indigates.

Laſtly, By the firſt, 2^d, 3^d, and 6th Letters, he determines and fills the 4th and laſt Figure of *Tranſcription*, (which was the firſt Figure of Inſcription) and conſequently he has before his eyes what he ſought for, which I do not believe the Underſtanding of any Mortal man were, by any other means than by being privy to the forementioned Accord, ever able to diſcover.

I have here underneath inſerted the *Scheme* of that firſt Figure of *Tranſcription*, (or 4th Figure of *Inſcription*,) that ſo by it, the Reader may plainly diſcern the manner of performing all the reſt.

Fig. I. *The Firſt Tranſcription.*



11	17	8	16	22	2	12	27	1	21	26	7	13	15	6	18	5	20	14	23	4	25	10	19	24	3	9
r		b			s			s			y			D		r				h		l			r	A
e		r			o			e			p			e		u				e		i			k	
u		y			t			l			c			n		i				t		d		.		
o		I			e			r			r			l		i				c		a	.			
s		s			n			o			i			u		s				m		p				
o		i			n			n			p			e		l				l	.					
e		n			n			r			a			i		o				d						
t		r			u			F			l			n		u			.							
e		e			m			r			H			y		b		.								
t		i			x			o			E			A		a	.									
h	.	i	.	.	r	.	.	o	.	.	u	.	.	w	.	n										

But foraſmuch as thoſe who write much in a *Crytographical* Method, have oft times occaſion to hide a Word, or ſhort Sentence, and not a whole Page, or Letter, I have thought it convenient (beſides thoſe Printed Papers which I have provided of all ſorts) to publiſh the Deſcription and Uſe of a ſmall portable, and low-priz'd *Machina*, very uſefull for that purpoſe.

A Deſcription of the MACHINA CYCLOLOGICA CRYPTOGRAPHICA.

THe lower part of the Inſtrument conſiſts of two Circular *Plates*, the one turning round on a Center within the other, And in that which turns there are 25 ſmall holes or *Foramina* at an equal diſtance. And both above, and beneath thoſe 25 *foramina*, there are 25 Letters, as *Pag.* 12. *Fig.* I.

The upper part or lid is a *Circular Plate*, the inner part whereof is cutt away, and upon the inner Limbe thereof 25 Letters graved, and in it a ſmall hole or window. And thoſe 25 Letters in any broken Method whatſoever, (*vid. Fig.* II, III, IV, & V.) onely the two Correſpondents muſt have each of the ſame Alphabet, in the very ſame Order, Letter for Letter: For Example, let their *Alphabet* be this, *viz. h q f r e i ſ d k s v l c t m y b x n w o z g a p.*

The Uſe of this Machina.

Let the Correſpondents *A.* and *B.* agree,

1. That one of thoſe 25 *Letters* ſhall be their *Key*, ſuppoſe (*m*).
2. That a certain number of *Nulls* (ſuppoſe 3) ſhall be placed between the 3^d and 4th Letter of the Writing, and another number of *Nulls* (*viz.* 4.) at the latter end.

Then, let *A.* write to *B.* theſe words:

Your Brother betrayes you.

The Method of Hiding.

Firſt, *A.* with the *Digital Index* (which is to be put on the third Finger of the Right hand, that ſo he may not be conſtrayn'd to lay down his Pen, at every motion, *vid. Fig.* VI.) turns the Letter (*m*) which is the Key, under the Window.

2. He puts the ſmall end of the *Digital Index* into the *foramen* or *hole* under the Window, and turns about the moveable Plate, till the ſmall end of the *Index* ſtand over againſt the firſt Letter of what he is to hide, and the Letter that appears through the Window is (*b*), which he ſets down; This done, he puts the *Index* again under the Window, and turns it over againſt the 2^d Letter of the Writing, *viz.* (*o*), and then (*f*) appears, which he ſets down likewiſe; And thus he repeats the ſame thing till the Writing be finiſhed, only between the 3^d and 4th Letters he intermingles 3 *Nulls*, viz. (*p w x*), and addes 4 *Nulls*, viz. (*n p s o*) at the end; And then the Writing ſtands thus, *viz.*

You r Brother betrayes you
b f d p w x y t z d t i b k ſ q d y m b l n o ſ l n p s o

Here by the way it is obſervable, that of this Writing, as it is hidden, the Letter *(d)* is thrice found; in one place it ſtands for *u*, in another for *o*, in a third for *t*. Thus *l*, for *e* and *u*; and *ſ*, for *o* and *b*; and *t*, for *b* and *r*. In fine, the nature of this *Machina* is ſuch, that in long Writing each Letter of the Alphabet may ſtand both for it ſelf and all the reſt, which makes the Intrigue a thouſand times more difficult, and leaves the Diſcoverer in infinite Doubts, and Uncertainties.

The Method of Diſcovering.

When *B.* receives this Writing, he immediately knows where the *Nulls* are, and cancells them; then placing the Key *(m)* in the Window of his *Machina*, he turns it about, till the firſt Letter of the Writing, as it is hidden, *viz.* *(b)* appear through the Window, and look what *Capital Letter* in the Cover, anſwers to the ſmall end of his *Index* (which he is not to take out till he has obſerved!) That is the firſt Letter of the given Intelligence. Again, he puts the Poynt of his *Index* in the hole under the Window, and turns it about till the 2d Letter of the ſame Writing, *viz.* *(f)* appear, and That is the 2d Letter of the Intelligence; And this *B.* repeats, till the whole be diſcovered; and then it ſtands thus:

b f d * * * y t z d t i h k ſ q d y m b l n o ſ l * * * *
y o u   r b r o t h e r b e t r a y e s y o u

AND THAT this Method may not appear to be leſs ſecure than the other, I ſhall, to ſatisfie the Reader's curioſity, ſhew him how it may be hidden doubly, trebly, &c. *in infinitum.*

For Example,

Let the Writing ſingly hidden ſtand as underneath, and a 2d Key being foredetermined between them, ſuppoſe *(p)*, *A.* places it under the Window, and then turns it about till the Poynt of the *Index* ſtand againſt the firſt Letter of the *ſimply-hidden Writing*, viz. *(b)*, and in the Window appears *(g)*, which he ſets down for *(b)*: And thus for *(f)* he finds *(b)* and ſo to the end, putting between the 3d and 4th Letters 3 *Nulls*, and 4 at the latter end.

b f d   y t z d t i h k ſ q d y m b l n o f l
g b c w n o m o z x a m ſ z r c k n a z u g k f b ſ w x a

After this very manner may this alſo be hidden by a third and different *Key*, and *Alphabet*, For ſo is the *Machina* contrived, that any *Alphabet* may be inſcribed and ſhifted, at pleaſure, either in the *moveable Plate*, or the *Cover*, vid. *Fig.* 2d, 3d and 4th.

And for a clearer proof of what has been aſſerted, The very ſame *Sentence* which is here underneath, by the help of that *Machina*, concealed, is alſo expreſs'd Word for Word, and Letter for Letter; And which is moſt of all, without any *Nulls* or inſignificant *Characters*; To ſee, if there be any Artiſt in the World who is able, by any lawfull means, or certain Rules, to give the true *Geneſis*, and *Analyſis* of that, or any ſuch *Cryptographical Writing*; And to diſcover the Original *Alphabet*, of each reſpective *Permutation*, by determining the ſeveral Stations and Aſpects of the *Literæ Exemtiles*, and their *Nova Clavis*; and from what *Foramina* they are to be turned on and off by the help of the *Digital Index*, and conſequently how each *Superior Letter* is ſignified by its *Inferior*, and no other.

Fig: I

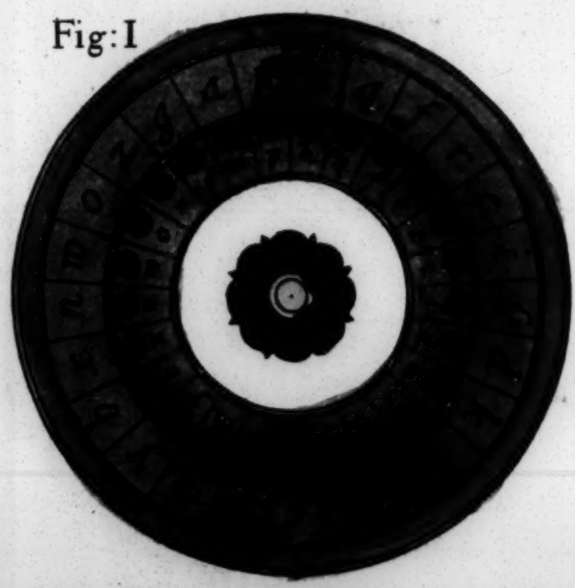


Fig: II

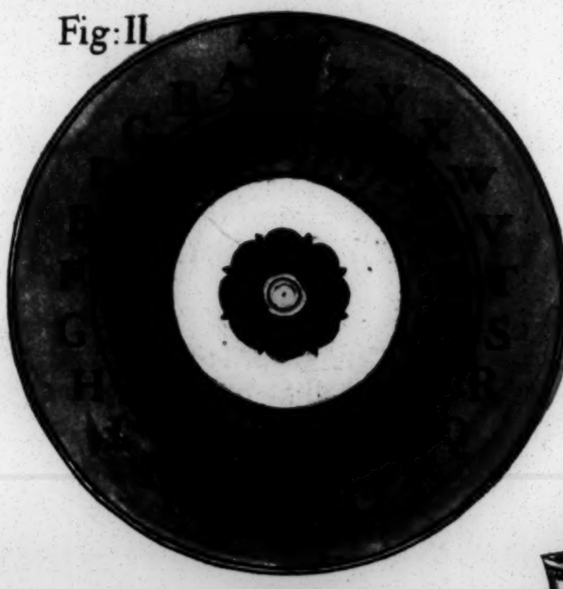


Fig: III

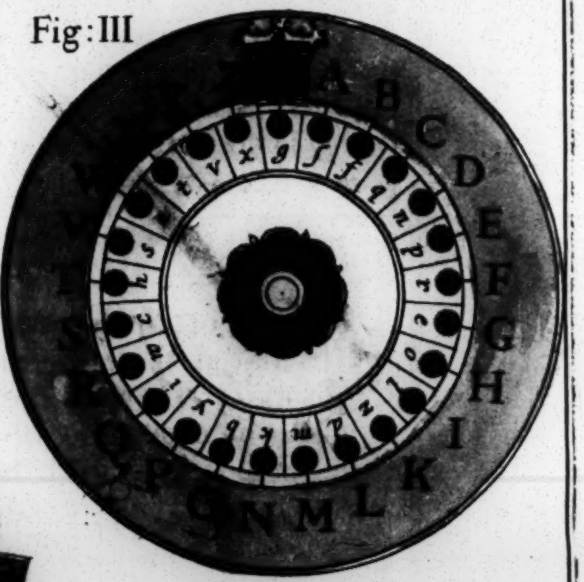
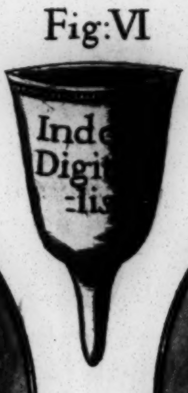


Fig: VI



Scriptio Steganographica.

CAUTÈ AGE, DUO
X l f u t r x i , q b d

PRÆCIPUI EX AULA
l i mi l b y g h g b r g w p

CONJURARUNT CONTRA TE
y w z r g t e q n f b w m n f z x m

Fig: IV

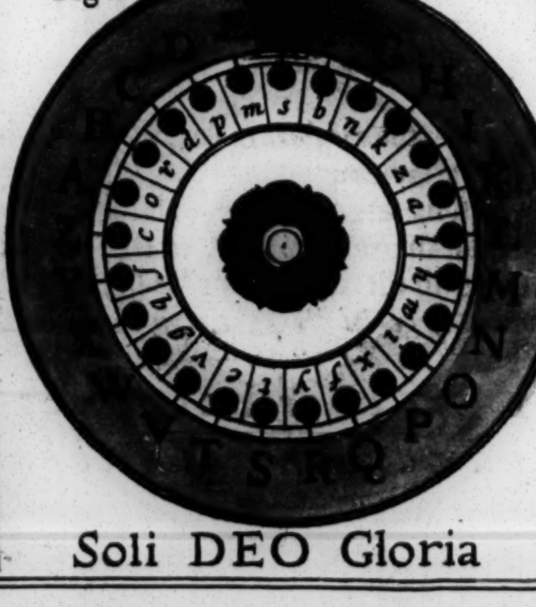
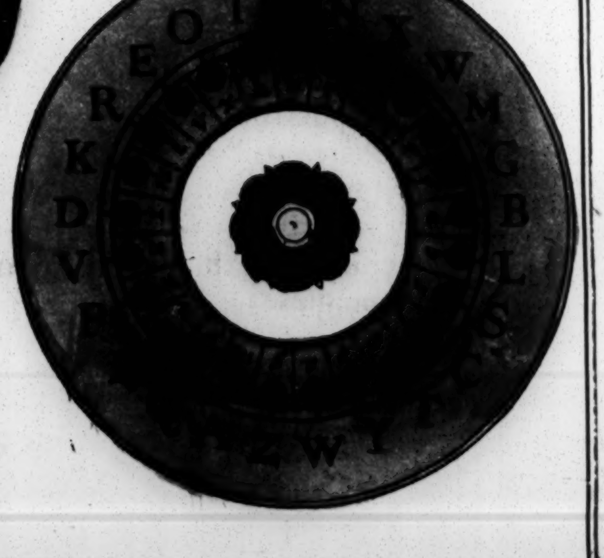


Fig: V



Soli DEO Gloria